ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever is a rickettsial disease caused by *Rickettsia rickettsii.* The disease is characterized by fever, headache, and myalgia, followed in three to five days by a maculopapular rash on the extremities that includes the soles of the feet and palms of the hands. The rash spreads to the rest of the body. Humans contract the disease most commonly from the bite of an infected tick or by contamination of the skin with tissue or feces from an infected tick. The tick must be attached for feeding for 4-6 hours. In Kentucky the American dog tick, *Dermacentor variabilis,* is the most common vector.

Laboratory Criteria for Confirmation:

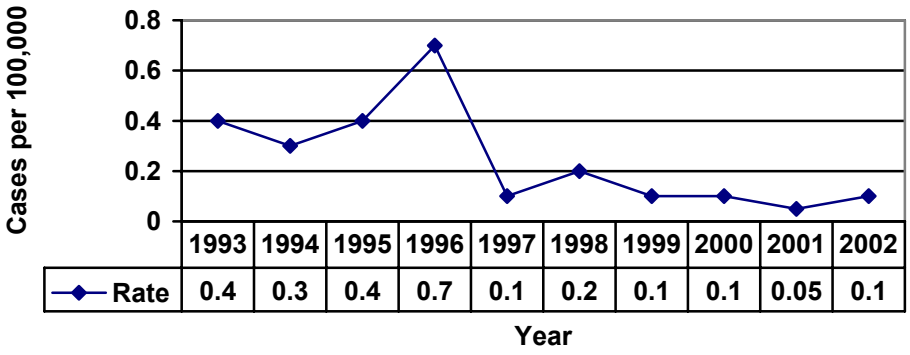
- Isolation of *R. rickettsii* from a clinical specimen (rarely performed), **OR**
- Demonstration of positive immunofluorescence in tissue biopsy, **OR**
- Fourfold or greater change in antibody titer to *R. rickettsii* antigen by immunofluorescent antibody (IFA), compliment fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination (IHA) test in acute and convalescent specimens ideally taken three weeks or more apart, **OR**
- Positive polymerase chain reaction (PCR) assay to *R. rickettsii.*

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

Probable: A clinically compatible case with 1) a single positive antibody titer by IFA (≥ 1:64 if IgG); or 2) a single CF titer ≥1:16; or 3) a single titer ≥ 1:128 by a latex agglutination, indirect hemagglutination antibody, or microagglutination test; or 4) a fourfold rise in titer or a single titer > 1:320, by Proteus OX-19 or OX-2 test.

Rocky Mountain Spotted Fever Incidence
Kentucky, 1993-2002



Epidemiology

Kentucky	2002	Rate per 100,000	U.S. Rate (2001) per 100,000
Cases	5	0.1	0.25

2002

The five confirmed cases ranged in age from 4 years to 51 years, with 3 being children under 12 years of age. Four of the cases occurred in April and May.

An additional 14 cases were classified as probable cases. These cases ranged in age from 1 year to 68 years of age. The lack of a convalescent titer is the primary reason more cases are not confirmed.

Cases were reported from across the state with a predominance in the western half.